

SEQUENCE LISTING

<110> HANAGATA, HIROSHI
NISHIJYO, TAKAYUKI

<120> NOVEL BREVIBACILLUS CHOSHINENSIS AND METHOD FOR
PRODUCING PROTEIN USING THE MICROORGANISM AS HOST

<130> 288727US-10578781

<140> 10/578,781

<141> 2006-05-09

<150> PCT/JP04/16912

<151> 2004-11-08

<150> JP 2003-381606

<151> 2003-11-11

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<170> PatentIn Ver. 3.3

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<213> *Brevibacillus choshinensis*

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His Ala Leu Gly Gln Ile Gln Asn Trp His Asn Glu Asp Glu Arg Ile	
355 360 365	
gtt cag gaa att cgc tcc cat ttt aca ggt tcc ctg acc gtg caa gac	1152
Val Gln Glu Ile Arg Ser His Phe Thr Gly Ser Leu Thr Val Gln Asp	
370 375 380	
ggc att gtt tgc ggt atg tat gct gcg cat gtc gtg gca gca gcc gtc	1200
Gly Ile Val Ser Gly Met Tyr Ala Ala His Val Val Ala Ala Val	
385 390 395 400	
caa gca gcc gtt tca gga gag atg gat acc tcc gct gcc ttc aca ggg	1248
Gln Ala Ala Val Ser Gly Glu Met Asp Thr Ser Ala Ala Phe Thr Gly	
405 410 415	
atg aaa acc ttg ctg aag agc atg cac gac gcc aat oct tcc tgg gga	1296
Met Lys Thr Leu Leu Lys Ser Met His Asp Ala Asn Pro Ser Trp Gly	
420 425 430	

cct ctc tat gta cga tat cgc ggt gat ctc act ccg cat cgc att tac 1344
 Pro Leu Tyr Val Arg Tyr Arg Gly Asp Leu Thr Pro His Arg Ile Tyr
 435 440 445

tcc cgt tct gcg agc tag 1362
 Ser Arg Ser Ala Ser
 450

<210> 6
 <211> 453
 <212> PRT
 <213> Brevibacillus choshinensis

<400> 6
 Met Asn His Pro Asp Phe Arg Asp Leu Pro Ala Cys Met Glu Asp Val
 1 5 10 15
 Thr Leu Ala Ala Leu Asp Glu Tyr Thr Gly Pro Pro Asp Pro Thr Glu
 20 25 30
 Tyr Gln Ser Leu Tyr Gly Arg Leu Gln Glu Val Ala Glu Thr Leu Pro
 35 40 45
 Pro Leu Tyr Arg Glu His Val Tyr His Pro Phe Leu Gln Ala Met Asp
 50 55 60
 Lys Leu Ser Glu Ser Gly Phe Ala Gln Met Leu Arg Arg Asp Pro Gln
 65 70 75 80
 Lys Glu Arg Glu Ala Gly Leu Phe Cys Asp Ile Ala Gln Ala Ile Leu
 85 90 95
 Gln Asn Gly Glu Ala Tyr Glu Arg Asp Ala Thr Asp Ala Phe Gln Glu
 100 105 110
 Val Val Ser Asp Leu Tyr Asp Gly Phe Leu Ser Glu Glu Asp Arg Ser
 115 120 125
 Gly Ile Lys Pro Pro Asp Glu Ser Leu Ile Ala Pro Leu Val Lys Trp
 130 135 140
 Gly Arg Pro Gln Phe Gly Pro Tyr Thr Trp Thr Ala Glu Ala Ala Ala
 145 150 155 160
 His Phe Gly Ile Lys Thr Gly Ile Val Asn Leu Pro Pro Ala Asn Ala
 165 170 175
 Arg Leu Gly Leu Leu Ala Trp Ser Ala Leu Gly His Glu Thr Ala Gly
 180 185 190
 His Asp Ile Leu His Ala Asp Thr Gly Leu Leu Gly Glu Leu Gln Gln
 195 200 205
 Thr Val Tyr Asp Ala Leu Phe Asp Glu Leu His Asn Arg Thr Leu Ala
 210 215 220

Asp Tyr Trp Ser Leu Arg Ile Asp Glu Thr Ala Ser Asp Val Leu Gly
 225 230 235 240
 Ile Leu Asn Thr Gly Pro Ala Ala Gly Ile Gly Leu Ile Gly Tyr Phe
 245 250 255
 Arg Gly Leu Asn Lys Ala Tyr Thr Gly Gln Ala Thr Leu Arg Asn Thr
 260 265 270
 Gly Pro Gln Asn Asp Pro His Pro Ala Asp Ile Leu Arg Gly Tyr Leu
 275 280 285
 Ala Ala Glu Thr Ala Arg Leu Leu His Phe Asp Asn Ala Ser Asp Trp
 290 295 300
 Ala Gln Ala Leu Leu Glu Glu Thr Arg Arg Asp Leu Lys Gly Ile Thr
 305 310 315 320
 Ile Gly Arg Ala Ser Leu Asp Ala Glu Thr Ala Gln Lys Ser Ala Ala
 325 330 335
 Ile Val Ala Arg Thr Ile Met Glu Ala Arg Leu Leu Ser Leu Glu Gly
 340 345 350
 His Ala Leu Gly Gln Ile Gln Asn Trp His Asn Glu Asp Glu Arg Ile
 355 360 365
 Val Gln Glu Ile Arg Ser His Phe Thr Gly Ser Leu Thr Val Gln Asp
 370 375 380
 Gly Ile Val Ser Gly Met Tyr Ala Ala His Val Val Ala Ala Ala Val
 385 390 395 400
 Gln Ala Ala Val Ser Gly Glu Met Asp Thr Ser Ala Ala Phe Thr Gly
 405 410 415
 Met Lys Thr Leu Leu Lys Ser Met His Asp Ala Asn Pro Ser Trp Gly
 420 425 430
 Pro Leu Tyr Val Arg Tyr Arg Gly Asp Leu Thr Pro His Arg Ile Tyr
 435 440 445
 Ser Arg Ser Ala Ser
 450

<210> 7

<211> 28

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic primer

<400> 7

gggggtacct cactctgtca gcatgctg

<210> 8
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
primer

<400> 8
gggggatccc ggcgtgattc ccactgc

27

<210> 9
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
primer

<400> 9
gggctgcaga tagcggatga aggtgtg

27

<210> 10
<211> 30
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
primer

<400> 10
gggtctagac ctgcttatac atctgtttcg

30

<210> 11
<211> 39
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
primer

<400> 11
gagagaccat ggaccatcct gattttcgcg atctacccg

39

<210> 12
<211> 60
<212> DNA
<213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic
 primer

 <400> 12
 agaattcagt ggtggtggtg gtggtggtgg tggctcgag aacgggagta aatgcgatgc 60

<210> 13
 <211> 44
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic
 primer

<400> 13
 aaaagaattc tttctgcaga acaggatgcg ggggagccgc cgct 44

<210> 14
 <211> 37
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic
 primer

<400> 14
 aaaaaggatc cttatagcat ctaatcttca acaaact 37

<210> 15
 <211> 39
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic
 primer

<400> 15
 aaaaaaagat cttgaacgat gacctctaataattgttaa 39

<210> 16
 <211> 43
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic
 primer

<400> 16
 aaaagaattc aaatctagaa agtgtgtgct ctgcgaggct gtc 43

<210> 17
 <211> 30
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic primer

<400> 17
 tccatggcac aatttggtat attatgtaaa 30

<210> 18
 <211> 32
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic primer

<400> 18
 actcgagtta tatgcgtcta tttatgtagg at 32

<210> 19
 <211> 37
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic primer

<400> 19
 ttttttctag actttatgaa tataaagtat agtgtgt 37

<210> 20
 <211> 37
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic primer

<400> 20
 gggggctgca gttatatgcg tctatztatg taggatg 37

<210> 21
 <211> 23
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic
 primer

<220>
 <221> modified_base
 <222> (6)
 <223> inosine

<220>
 <221> modified_base
 <222> (9)
 <223> a, c, g or t

<220>
 <221> modified_base
 <222> (15)
 <223> a, c, g or t

<400> 21
 aarcgngtnc ayacngayaa yct

23

<210> 22
 <211> 23
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic
 primer

<220>
 <221> modified_base
 <222> (3)
 <223> a, c, g or t

<220>
 <221> modified_base
 <222> (6)
 <223> inosine

<220>
 <221> modified_base
 <222> (9)
 <223> a, c, g or t

<220>
 <221> modified_base
 <222> (15)
 <223> a, c, g or t

<400> 22
 aanccngtng gytgngtytg gaa 23

<210> 23
 <211> 23
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic
 primer

<400> 23
 cctcgtagtg cttttggtcg aag 23

<210> 24
 <211> 23
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic
 primer

<400> 24
 accaataccg gagtgaacca gca 23

<210> 25
 <211> 19
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic
 primer

<400> 25
 actatagggc acgcgtggt 19

<210> 26
 <211> 41
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic
 primer

<400> 26
 ctcccatggc ttctgctacc cccgtgcagt ccgtggactg c 41

<210> 27
 <211> 34
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic
 primer

<400> 27
 atataagctt ttagggagag aggacttcca tggta 34

<210> 28
 <211> 35
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic
 primer

<400> 28
 tttctgcagg taaaatcgaa gaaggtaaac tggta 35

<210> 29
 <211> 34
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic
 primer

<400> 29
 aaaaagcttt tacttggtga tacgagtctg cgcg 34

<210> 30
 <211> 37
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic
 primer

<400> 30
 ttttgatcc gaggaggtgt cggagaactg tagccac 37

<210> 31
 <211> 34
 <212> DNA
 <213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic primer

<400> 31

aaaaagcttc tacactggca gtcctcctg tctg

34

<210> 32

<211> 23

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic primer

<400> 32

aaggatcccc gtcatatccg gca

23

<210> 33

<211> 28

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic primer

<400> 33

aaaagcttta ggcgttatcc gctttagc

28

<210> 34

<211> 39

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic primer

<400> 34

tatatccatg gcttcttact gccaggcgcc cttttttaa

39

<210> 35

<211> 37

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic primer

<400> 35

atataagctt ttattttgat gctctctggc cttggaa

37

<210> 36
<211> 32
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
primer

<400> 36
atattcatga gcaacgactt gcttcgatcc ca 32

<210> 37
<211> 36
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
primer

<400> 37
atataagctt tcagttctgg agataatctg taagta 36

<210> 38
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
peptide

<400> 38
Lys Arg Val His Thr Asp Asn Leu
1 5

<210> 39
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
peptide

<400> 39
Phe Gln Thr Gln Pro Thr Gly Phe
1 5

<210> 40
 <211> 24
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic
 peptide

<400> 40
 Ala Ser Lys Arg Val His Thr Asp Asn Leu Val Ile Ala Leu Val Glu
 1 5 10 15
 Phe Asn Asp Leu Glu Gly Asn Gln
 20

<210> 41
 <211> 10
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic
 peptide

<400> 41
 Ile Phe Gln Thr Gln Pro Thr Gly Phe Asp
 1 5 10